

Remarks

A. Pending Claims

Claims 91-92, 495-519, 521-545, 547-571, and 573-597 have been rejected. Claims 520, 546, 572, and 598 have been objected to. Claims 91-92, 499, 502, 504-507, 516-517, 519, 521-545, 547, 549, 553, 556-559, 568-569, 571, 573, and 574-597 have been amended. Claims 520, 546, 572, and 598 have been cancelled. Claims 91-92, 495-519, 521-545, 547-571, and 573-597 are pending.

B. The Claims Are Definite Pursuant To 35 U.S.C. § 112 Second Paragraph

The Office Action includes a rejection of claims 504, 506-507, 530, 532-533, 556, 558-559, 582, and 584-585 under 35 U.S.C. 112 Second Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully disagrees with these rejections.

Applicant respectfully disagrees with the Office Actions rejection of claims 504, 506-507, 530, 532-533, 556, 558-559, 582, and 584-585. To expedite prosecution, however, Applicant has amended or cancelled claims 504, 506-507, 530, 532-533, 556, 558-559, 582, and 584-585.

C. The Claims Are Directed Towards Statutory Subject Matter Pursuant To 35 U.S.C. § 101

The Office Action includes a rejection of claims 92, 521-546, and 573-598 under 35 U.S.C. §101 as being directed to non-statutory subject matter. Applicant respectfully disagrees with these rejections.

Applicant respectfully disagrees with the Office Actions rejection of claims 92, 521-546, and 573-598. To expedite prosecution, however, Applicant has amended or cancelled claims 92, 521-546, and 573-598.

D. The Claims Are Not Anticipated By Halmann Pursuant To 35 U.S.C. § 102(b)

The Office Action included a rejection of claims 91-92, 495-503, 505-509, 511-513, 515-518, 521-529, 531-535, 537-539, 541-544, 547-555, 557-561, 563-565, 567-570, and 573-581, 583-587, 589-591, and 593-596 pursuant to 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,151,856 to Halmann et al. ("Halmann"). Applicant respectfully disagrees.

The standard for "anticipation" is one of fairly strict identity. To anticipate a claim of a patent, a single prior source must contain all the claimed essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 U.S.P.Q.81, 91 (Fed. Cir. 1986); *In re Donahue*, 766 F.2d 531,226 U.S.P.Q. 619,621 (Fed. Cir. 1985).

Applicant respectfully submits that Halmann does not appear to teach or suggest the combination of features in claims 91-92, 495-503, 505-509, 511-513, 515-518, 521-529, 531-535, 537-539, 541-544, 547-555, 557-561, 563-565, 567-570, and 573-581, 583-587, 589-591, - - - and 593-596.

Amended claim 91 describes a combination of features including, but not limited to, the feature of: "determine at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and assess a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta." Applicant believes the amendments do not require a new search.

Amended claim 92 describes a combination of features including, but not limited to, the feature of: "determining at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and assessing a mitral regurgitation with a provided

velocity of a fluid through at least a portion of the aorta.” Applicant believes the amendments do not require a new search.

Amended claim 547 describes a combination of features including, but not limited to, the feature of: “determine at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and assess a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.” Applicant believes the amendments do not require a new search.

Amended claim 573 describes a combination of features including, but not limited to, the feature of: “determining at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and assessing a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.” Applicant believes the amendments do not require a new search.

Applicant submits Halmann does not appear to teach or suggest the combination of features in Applicant’s claims, including but not limited to “determine at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and assess a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta;” or “determining at least a first and second volume of a portion of the heart tissue and blood flow through a portion of the heart; and assessing a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta.” Applicant respectfully requests the anticipation rejection be rescinded.

Applicant submits that Halmann does not appear to teach or suggest the combination of features in claims 91-92, 495-503, 505-509, 511-513, 515-518, 521-529, 531-535, 537-539, 541-544, 547-555, 557-561, 563-565, 567-570, and 573-581, 583-587, 589-591, and 593-596. Applicant further submits that at least some of the claims dependent on independent claims 91-92, 495-503, 505-509, 511-513, 515-518, 521-529, 531-535, 537-539, 541-544, 547-555, 557-

561, 563-565, 567-570, and 573-581, 583-587, 589-591, and 593-596 are separately patentable over Halmann.

E. The Claims Are Not Obvious Over Halmann In View Of Official Notice Pursuant To 35 U.S.C. § 103(a)

Claims 504, 510, 514, 519, 530, 536, 540, 545, 556, 562, 566, 571, 582, 588, 592, and 597 were rejected under 35 U.S.C. § 103(a) as obvious over Halmann in view of Official Notice. Applicant respectfully disagrees.

To reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner et al.*, 379 F.2d 1011, 154 USPQ 173, 177-178 (CCPA 1967). To establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03.

Applicant respectfully submits that Halmann does not appear to teach or suggest the combination of features in claims 504, 510, 514, 519, 530, 536, 540, 545, 556, 562, 566, 571, 582, 588, 592, and 597.

Applicant respectfully disagrees with the Examiner's assertions. Portions of the aforementioned rejection appear to be set forth in facts within the personal knowledge of the Examiner and therefore Applicant believes MPEP 2144.03 will apply. Pursuant to MPEP 2144.03, Applicant respectfully requests the Examiner to provide support for his assertion either by an affidavit or by references brought to the Applicant's attention. Otherwise, Applicants request this rejection be removed. *See, e.g.*, MPEP 2143.01

Applicant respectfully submits that the cited art does not appear to teach or suggest the combination of features in claims 504, 510, 514, 519, 530, 536, 540, 545, 556, 562, 566, 571, 582, 588, 592, and 597. Applicant respectfully submits that Halmann does not appear to teach or

suggest the combination of features in claims 504, 510, 514, 519, 530, 536, 540, 545, 556, 562, 566, 571, 582, 588, 592, and 597 for at least the reasons stated in Section D, due to the fact that Halmann does not overcome the problems associated with the Office Action's rejection of independent claims 91-92, 547, and 573, from which claims 504, 510, 514, 519, 530, 536, 540, 545, 556, 562, 566, 571, 582, 588, 592, and 597 depend.

F. Allowable Subject Matter

Claims 520 and 572 are objected to as being dependent on a rejected base claim. The Office Action states that claims 520 and 572 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 546 and 598 are objected to as being dependent on a rejected base claim. The Office Action states that claims 546 and 598 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, as well as, resolving any 35 U.S.C. §101 rejection issues asserted in the current Office Action.

Claim 91 includes features from objected to dependent claim 520. As such, Applicant submits that claim 91 and the claims dependent thereon, are in condition for allowance.

Claim 92 includes features from objected to dependent claim 546. As such, Applicant submits that claim 92 and the claims dependent thereon, are in condition for allowance.

Claim 547 includes features from objected to dependent claim 572. As such, Applicant submits that claim 547 and the claims dependent thereon, are in condition for allowance.

Claim 573 includes features from objected to dependent claim 598. As such, Applicant submits that claim 573 and the claims dependent thereon, are in condition for allowance.

G. Response to Reasons for Allowance

The Office Action states:

the closest prior art (Halmann) does not teach “assessing a mitral regurgitation with a provided velocity of a fluid through at least a portion of the aorta”.

Applicant respectfully disagrees with the Examiner’s Statement of Reasons for Allowance and/or Applicant believes that the Examiner’s Statement of Reasons for Allowance is incomplete.

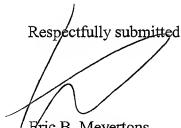
Applicant respectfully submits that the cited art does not teach or suggest the combinations of features set forth in the Applicant’s claims. By way of nonlimiting example, Applicant submits the submitted references at least do not appear to teach or suggest, as stated in claim 92, “comparing at least one effect of the first modification to at least one effect of the second modification, or comparing at least one effect of the second modification to at least one effect of the first modification,” in combination with the other features of the claims.

H. Conclusion

Applicant submits that the claims are in condition for allowance. Favorable reconsideration is respectfully requested.

Applicant respectfully requests a three-month extension of time. A fee authorization form has been submitted to cover fees associated with a three-month extension of time. If any further extension of time is required, Applicant hereby requests the appropriate extension of time. If any further fees are required, or have been overpaid, please appropriately charge, or credit, those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5838-00204/EBM.

Respectfully submitted,



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